SIGMA

THE DERBY MARK-VI
V8
8 HORSE SPEC.

Converting Kit

CODE NO. 8800-00192

INTRODUCTION

This Instruction Manual is intended for Qualified Service Personel, and provides the important information to convert your existing MARK-VI EXP to MARK-VI V8.

It is strongly recommended to read and understand this manual thoroughly before converting. Please always keep this manual at hand, so that you can quickly refer to it whenever necessary.

TECHNICAL SUPPORT

If you have any question or request, or when you want our technical support, please contact to your nearest distributor.

TABLE OF CONTENTS

1. UNPACKING AND INSPECTION

1.1   Packing List

Check the following items for shipping damage. If any damage is found, immediately report it to Sigma Inc. or your nearest distributor.

Part No.	Part Name	Type	Qty
9300-01248	MARK-VI 8 HORSES SET	UM-8 HORSE	2
		(Including one set of spares)	
8050-01318	GATE COVER 8	09-387-058-0	2
9180-01997	JAE JP HARNESS	48-487-288-0	2
9281-00041	KEY BOARD	101/PS2	1
8060-01283	V8 STICKER (label)	09-487-004-0	1
3021-00295	CORD KEEP	K-105G	48
3021-00275	CKN CLAMP	CKN-13	12
9140-00010	MK6-8 SW. PANEL	FK-BS40-V7F	13
8060-01251	MK6-8 SW. PANEL SHEET	FK-ON40-V7G	14
		(dependant on your specifications)	
		(Including 2 spares)	
8060-01261	COIN CUP SEAL 8	09-287-002-0	12
		(dependant on your specifications)	
	UV EP ROM (for main control unit)		2
		(dedicated to each market)	
	UV EP ROM (for station units)		48
		(dedicated to each market)	
	INSTALL DISK	3.5" FLOPPY DISK	1
	VER.UP DISK	3.5" FLOPPY DISK	18
		(from No.1 through No.18)	
	INSTRUCTION MANUAL		1

1.2   Tools Required

Prepare the following tools on your own.

1. Allen wrench or box wrench to be used for 5mm wide M3 nut
2. Allen wrench to be used for 2mm wide magnet catch
3. Phillips screwdriver #1
4. Phillips screwdriver #2
5. Slotted screwdriver
6. A pair of plier
7. VGA monitor
    (You can use the VGA monitor located in the main control unit.)
8. Alcohol for degreasing

2. HOW TO CONVERT

2.1   Converting Track Unit

2.1.1   Accessing to track unit and undercarriers

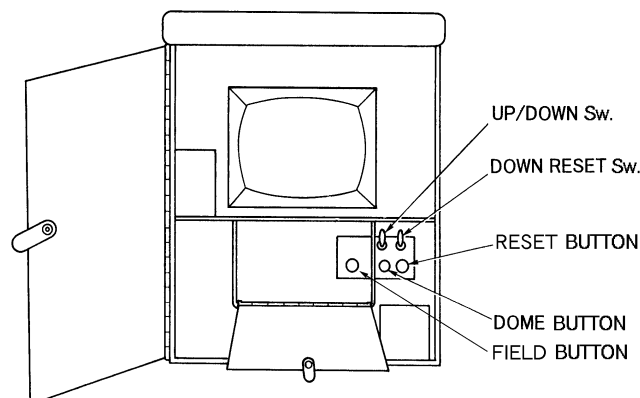Access to the track unit and the undercarriers in the following procedure.

Procedure

1.   Open the front door of the main control unit to turn OFF all the power breakers.

2.   Referring to our MARK-VI EXP Service Manual, Paragraph 4.2, move all the station units to keep them about 1m apart from the track unit.

3.   Disconnect all the cables between the station units and the track unit for easier work.

> ### *NOTE*
>
> *Do not disconnect the cables between the main control unit and the track unit.*

4.   Turn ON the rightmost breaker for the main control and track units.

5.   Wait for the two start gates (on the track field) to return to their home positions.

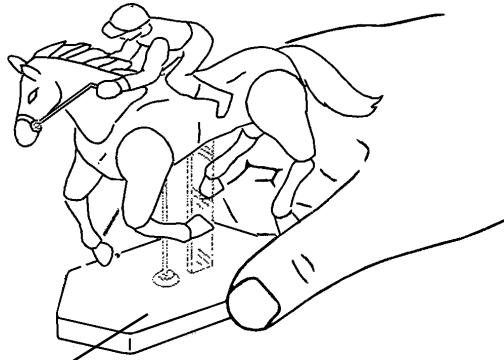6.   Referring to our MARK-VI EXP Service Manual, Paragraph 4.3.1, elevate the dome.

UP/DOWN Sw.

DOWN RESET Sw.

RESET BUTTON

DOME BUTTON
FIELD BUTTON

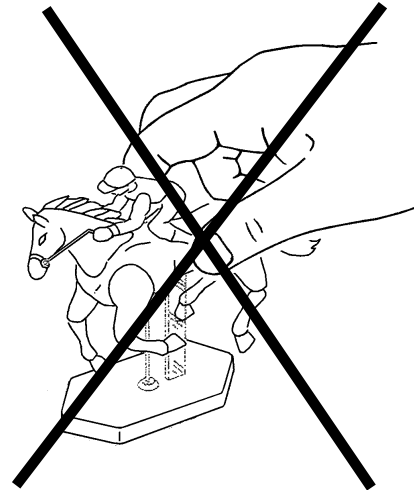7. Remove all the horse assemblies from the track field.

⚠ CAUTION!

Because the horse assemblies are breakable, DO NOT touch the horse bodies or the shafts.

Hold the horse base by hand.

NOTE
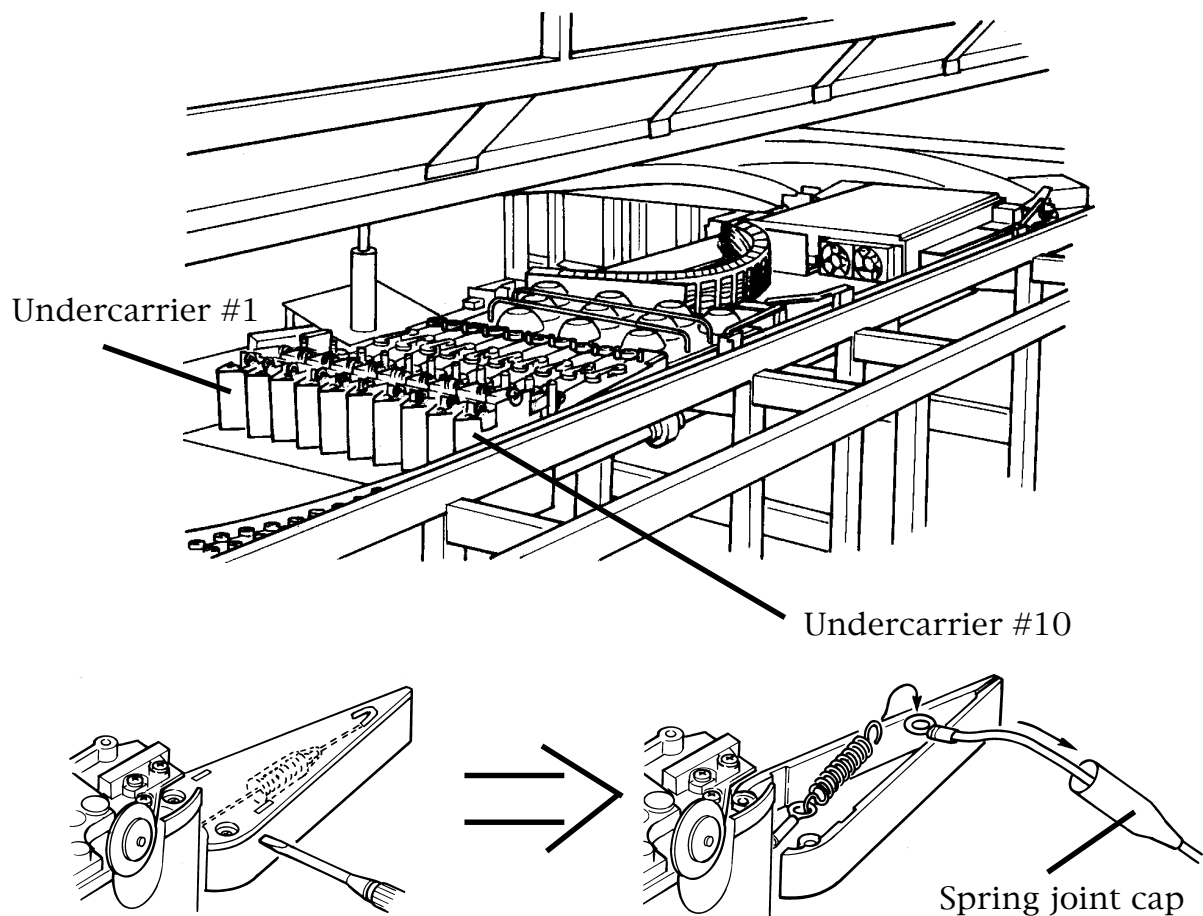*Keep the removed horse assemblies as spares.*

8. Referring to our MARK-VI EXP Service Manual, Paragraph 4.3.2, elevate the track field.

9. Turn OFF the rightmost breaker. (Now all the breakers are OFF again.)

2.1.2　Retrofitting undercarriers

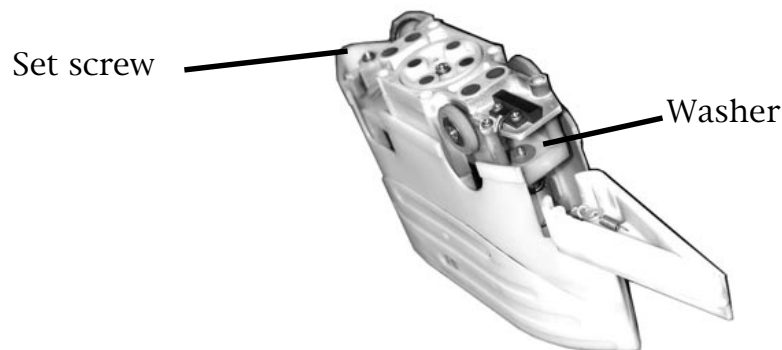Retrofit the undercarriers #1 and #10 in the following procedure.

Procedure

1. Remove the wire from the undercarrier #1 as below.

   (1) Remove the cover from the wire joint section by using the slotted screwdriver. (If the cover is screwed, unscrew it.)
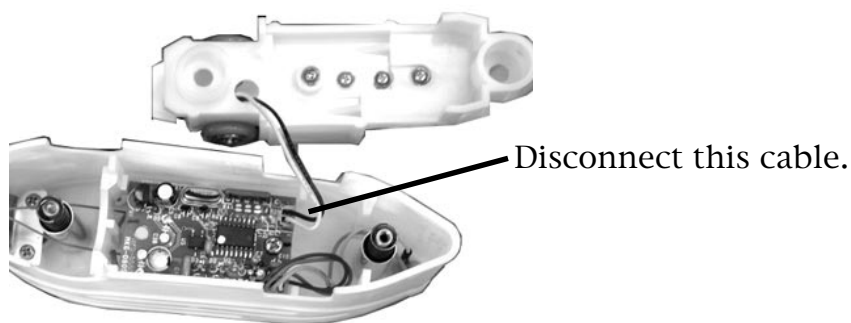
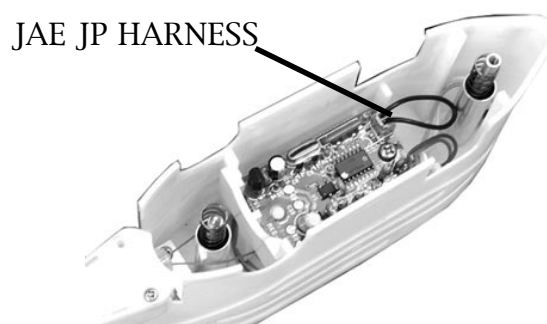   (2) Slide the spring joint cap to unhook the wire.

Undercarrier #1

Undercarrier #10

Spring joint cap

2. Take out the undercarrier #1.

3. Remove the set screw and washer depicted below to separate the upper and lower parts.

Set screw

Washer

4. Disconnect the cable (to the FALL RACER sensor) from the CN1.

Disconnect this cable.

5. Connect the delivered jumper harness (JAE JP HARNESS) to the CN1.

JAE JP HARNESS

6. Taking attention not to pinch the disconnected cable, reassemble the undecarrier.

7. Connect the wire that has been removed in Step 1 to the undercarrier #1.

8. Repeat the above steps from No. 1 through No. 7 to the undercarrier #10.

9. Rewind all the wires for the undercarriers from #1 through #10.

10. Referring to our MARK-VI EXP Service Manual, Paragraph 4.3.3, lower the track field.
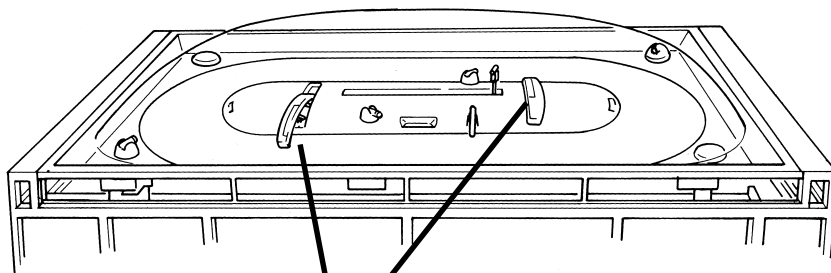
2.1.3   Replacing start gates

Remove the existing gates for a long- and short- distance races.

Procedure

1.   Pull up the gate to remove it from the track field.
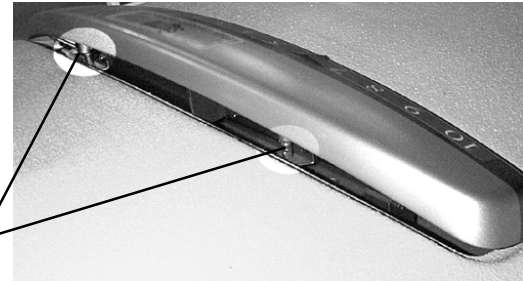

NOTE

The gate is just fixed with 2 magnets.

Start gates

Magnets

2.   Install the new start gate cover (GATE COVER 8) as below.

(1)   Remove the magnet catches from the cover of the start gate that has been removed in Step 1.

(2)   Attach the magnet catches to the new start gate cover by inserting an allen wrench into the hole of the magnet catch, then turning it counterclockwise.

Magnet catch   Allen wrench

(3) Place the new start gate cover on the track field to secure it by the magnets.

2.1.4 Installing new horse assemblis

Install the new horse assembly #1 (MARK-VI 8 HORSES SET) on the undercarrier #2, the horse assembly #2 on the undercarrier #3, ... , the horse assembly #8 on the undercarrier #9.

NOTE

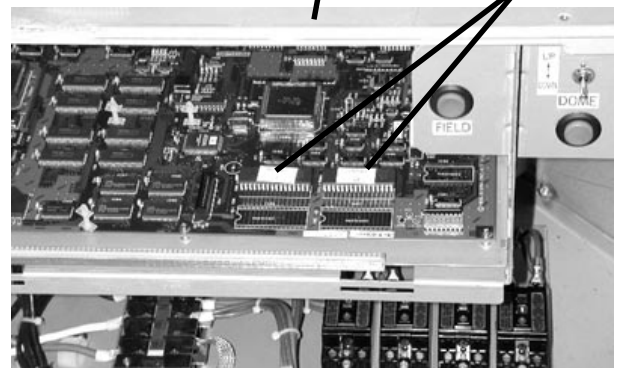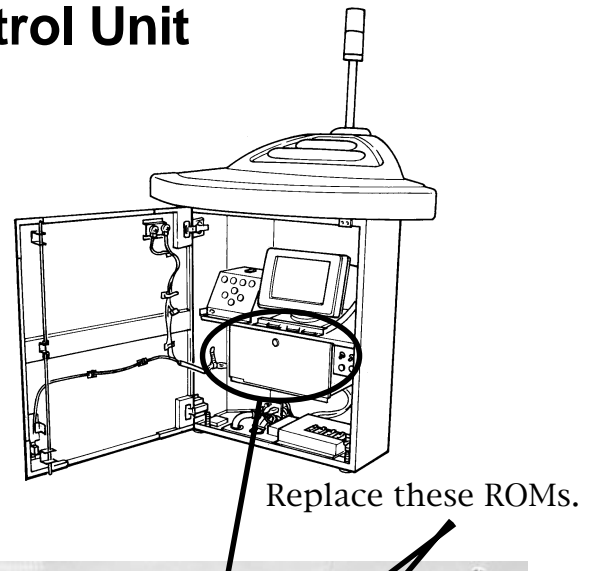*There is no horse assembly on the undercarriers #1 and #10.*

2.1.5 Lowering dome

Referring to our MARK-VI EXP Service Manual, Paragraph 4.3.4, lower the dome.

2.2 Converting Main Control Unit

2.2.1 Replacing main ROMs

Procedure

1. Open the front door of the main control unit.

2. Unlock the PCB box to withdraw the PCB board.

3. Carefully remove the ROMs from IC59 and IC60 sockets.

4. Insert the new ROMs (UV EP ROM) into the sockets.

5. Check that the ROMs are correctly inserted.

6. Return the PCB into the PCB box.

7. Lock the PCB box then close the front door.

Replace these ROMs.

NOTE
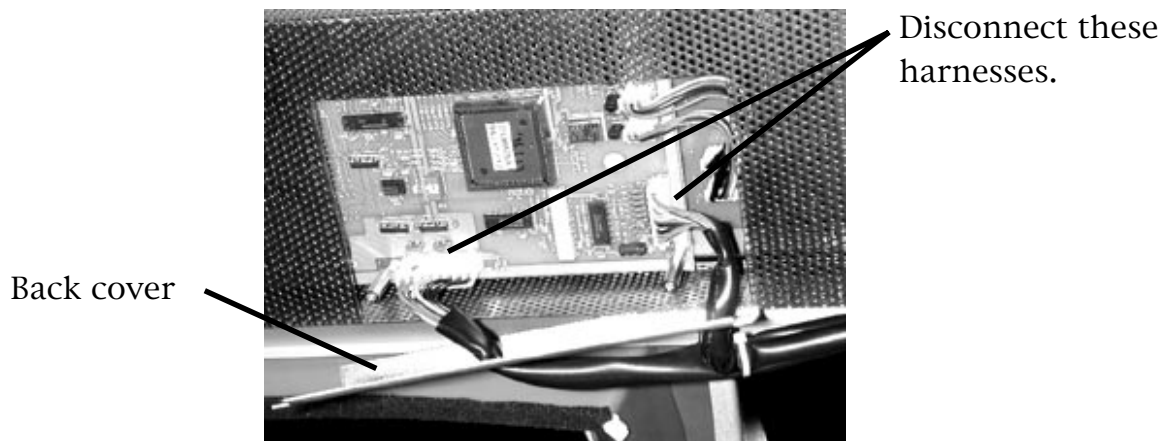
The version number of the new ROMs is dedicated to each market.
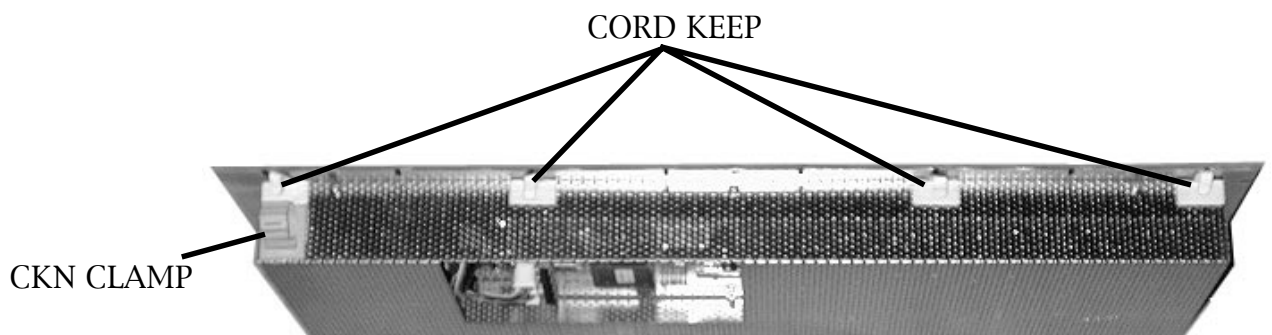
2.3   Converting Station Units

2.3.1   Replacing button panel

Procedure

1.   Open the upper door of the station unit to find the back cover of the button panel.

2.   Remove the back cover to disconnect the 2 harnesses depicted below.

Disconnect these harnesses.

Back cover

3.   Loose the harnesses off the cable ties (CKN CLAMP, and CORD KEEP) located on the side of the button panel.

CORD KEEP

CKN CLAMP

4.   Remove the button panel by loosening the M3 nuts.

5.   Using the alchohol, degrease the cable tie pasting place of the delivered button panel (MK6-8 SW. PANEL).

6.   Paste the delivered cable ties (CKN CLAMP, and CORD KEEP) on the button panel.

7. Place the panel sheet (MK6-8 SW. PANEL SHEET) on the upper surface of the button panel.

8. Screw down the panel sheet and the button panel together on the upper door.

9. Remove the back cover of the button panel to connect the 2 harnesses that have been disconnected in Step 2.

10. Return the back cover to the button panel.

11. Secure the harnesses with the cable ties that have been pasted in Step 6.

12. Close the upper door.

2.3.2   Pasting new coin cup label

Procedure

1. Open the upper and front doors of the station unit.

2. Unscrew the coin cup assembly from the cabinet and then the coin head from the coin cup assembly.

3. Degrease the surface of the existing label on the coin cup assembly.

4. Paste the new label (COIN CUP SEAL8) on the degreased surface.

> ### *NOTE*
> *Care must be paid so that the new label is exactely palced on the existing one.*

5. Aligning to the coin guide, screw the coin head on the coin cup assembly.

6. Screw the coin cup assembly on the cabinet.
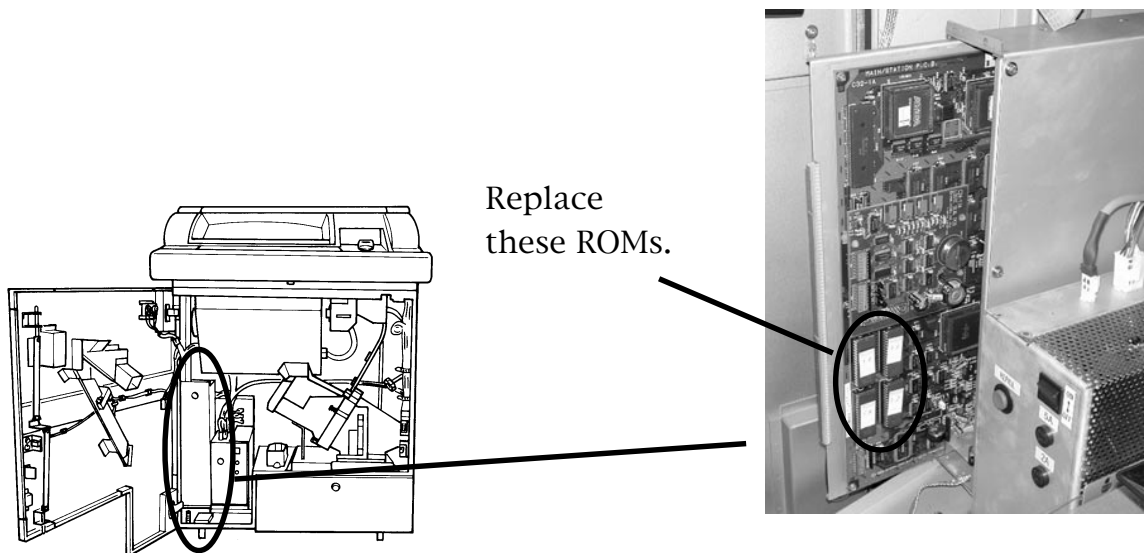
7. Close the upper and front doors.

2.3.3   Replacing station ROMs

Procedure

1.   Open the front door of the station unit.

2.   Unlock the PCB box to withdraw the PCB.

3.   Locate the ROMs (IC 59, IC 60, EC66, and IC67) on the PCB to replace them with the new ones (UV EP ROM).

NOTE

The ROM version is dedicated to each market.
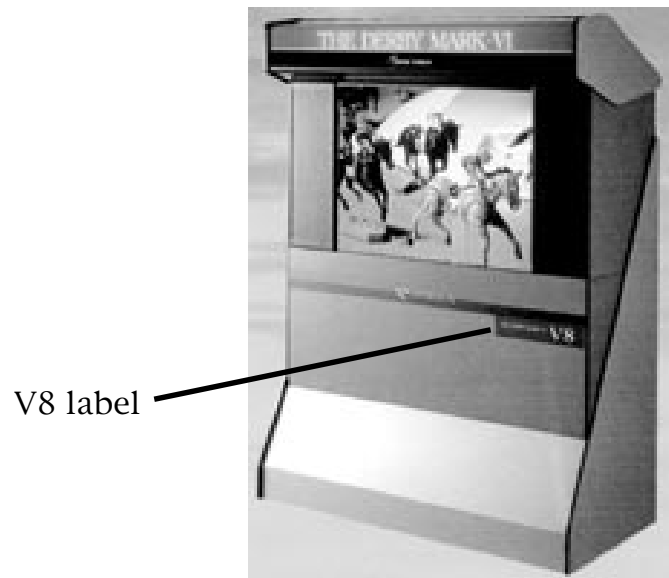

Replace these ROMs.

4.   Return the PCB into the PCB box.

5.   Lock the PCB box then close the front door.

2.4   Converting Projector Unit (Upright)

2.4.1   Pasting V 8 lable

Procedure

1.   Degrease the surface of the place on which you want paste the new label (V8 STICKER).

2.   Paste the label.

V8 label

2.5   Converting AT Box (PC-AT Computer)
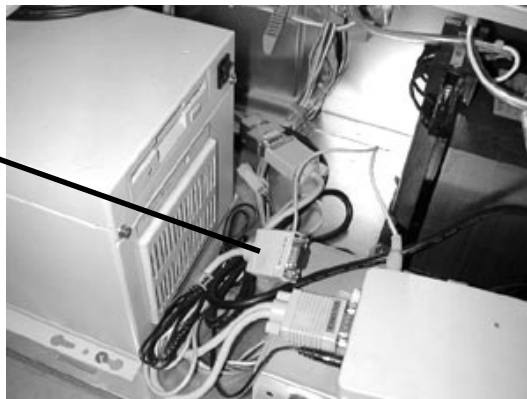
2.5.1   Installing new software

Procedure

1.   Referring to our MARK-VI EXP Service Manual, Paragraph 4.2, access to the AT Box.

2.   Unlock the AT box to find the PC-AT Comupter.

3.   Insert the " Install Disk (3.5" floppy disk)" in the floppy drive of the PC-AT Comupter.

4.   Connect a VGA monitor or the equivalent to the PC-AT Comupter.

> ### *NOTE*
> *The VGA monitor located in the main control unit (corner unit) can be used.*
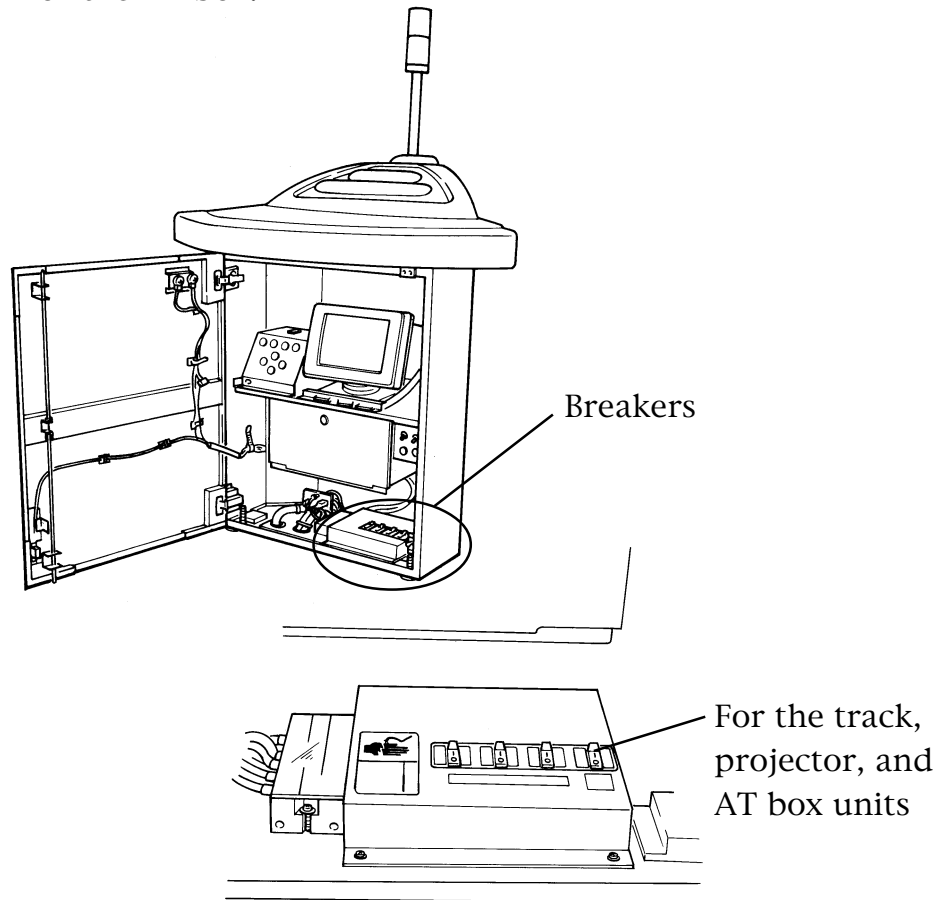
Connect to the monitor.

5.   Connect the delivered keyboard to the PC-AT Comupter.

Connect to the keyboard.

6. Open the front door of the main control unit to turn ON the rightmost breaker for the AT box.

Breakers

For the track, projector, and AT box units

7. Plug in the VGA monitor to activate the "Install Disk" inserted in Step 3.

> ### *NOTE*
>
> *When you used the monitor located in the main control mode, make sure to use the convenient outlet on the AT-box. This monitor is designed for 100VAC.*

8. When the following is displayed, insert the next floppy disk "DISK No.1" then press the [ENTER] key.

```
=========================================
 Please insert DISK No 1
=========================================
```

9. Follow the instruction displayed .

10. When finishing the last floppy disk "DISK No.18", the following is displayed.

    ```
    =======================================

    Do you change it to 24322001 versions now?
    Yes. Push any key.
    No.  Push Ctl +C.

    =======================================
    ```

11. To version up, press any key.
    To cancel this version-up, press [Ctl] +[C].

12. Eject the floppy disk from the drive.

13. Unplug the VGA monitor and turn OFF the rightmost breaker in the main control unit.

14. Disconnect the VGA monitor and the keyboard from the PC-AT Comupter.

    ### NOTE
    When you used the monitor located in the main control unit, return it to the previous position.

15. Wait for about 10 seconds, and turn ON the rightmost breaker for the the projector unit .

16. Verify that the new version No. is displayed on the screen of the projector unit.

Now the conversion work is completed.

3. INSTALL CHECK LIST

1. Converting Track Unit

(1) Retrofit the undercarriers #1 and #10

(2) Replace the start gates.

(3) Install the new horse assemblies

2. Converting Main Control Unit

(1) Replace the main ROMs.

3. Converting Station Units

(1) Replace the button panels.

(2) Paste new coin cup labels.

(3) Reple Station ROMs.

4. Converting Projector Unit (Upright)

(1) Paste V8 label.

5. Converting AT Box (PC-AT Computer)

(1) Install new game software.

THE DERBY MK-VI V8

8 HORSE SPEC. Converting Kit

January, 2000   Ver. 001

Edited & issued by Sigma, Inc.

MO Building, 3-14-15 Higashi, Shibuya-ku, Tokyo, Japan

Phone: +81-3-3486-5771   Fax: +81-3-3486-5770

http://www.sigma.co.jp   E-mail: overseas@sigma.co.jp